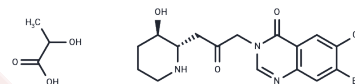


HALOFUGINONE LACTATE

Chemical Properties

CAS No. :	82186-71-8
Formula:	C ₁₉ H ₂₃ BrClN ₃ O ₆
Molecular Weight:	504.8
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	HALOFUGINONE LACTATE is a halogenated derivative of febrifugine, a natural quinazolinone-containing compound found in the Chinese herb <i>D. febrifuga</i> . Halofuginone inhibits prolyl-tRNA synthetase in an ATP-dependent manner with a K_i of 18.3 nM. Halofuginone is a specific inhibitor of type-I collagen synthesis and attenuates osteoarthritis (OA) by inhibition of TGF- β activity
Targets(IC50)	Calcium Channel,Parasite,DNA/RNA Synthesis,Sodium Channel,TGF-beta/Smad
In vitro	halofuginone (HF), a widely studied derivative of febrifugine, inhibits the development of T(H)17-driven autoimmunity in a mouse model of multiple sclerosis by activating the amino acid response (AAR) pathway. HF binds glutamyl-prolyl-tRNA synthetase (EPRS), inhibiting prolyl-tRNA synthetase activity; this inhibition is reversed by the addition of exogenous proline or EPRS[1].

Solubility Information

Solubility	DMSO: 22.5 mg/mL (44.57 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	---

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.981 mL	9.9049 mL	19.8098 mL
5 mM	0.3962 mL	1.981 mL	3.962 mL
10 mM	0.1981 mL	0.9905 mL	1.981 mL
50 mM	0.0396 mL	0.1981 mL	0.3962 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Keller TL, et al. Halofuginone and other Febrifugine derivatives inhibit prolyl-tRNA synthetase. Nat Chem Biol. 2012 Feb 12;8(3):311-7.

Twamley S G, Gimber N, Sánchez-Ibarra H E, et al. Lack of Laminar Shear Stress Facilitates the Endothelial Uptake of Very Small Superparamagnetic Iron Oxide Nanoparticles by Modulating the Endothelial Surface Layer. International Journal of Nanomedicine. 2024: 3123-3142.

Cui Z, et al. Halofuginone attenuates osteoarthritis by inhibition of TGF- β activity and H-type vessel formation in subchondral bone. Ann Rheum Dis. 2016 Sep;75(9):1714-21.

Bin, Guo-Hua, Xian-Feng, et al. Halofuginone protects HUVECs from H₂O₂-induced injury by modulating VEGF/JNK signaling pathway.[J]. Journal of the Chinese Medical Association : JCMA, 2019.

Tsuchida K, et al. Halofuginone enhances the chemo-sensitivity of cancer cells by suppressing NRF2 accumulation. Free Radic Biol Med. 2017 Feb;103:236-247.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481